



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

0073771

AUG 10 2007

07-ESQ-132

Ms. Jane A. Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

RECEIVED
AUG 20 2007

EDMC

Dear Ms. Hedges:

SUBMITTAL OF HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY
ACT (RCRA) PERMIT MODIFICATION NOTIFICATION FORM 24590-LAW-PCN-ENV-
07-003

Reference: WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource
Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of
Dangerous Waste, Part III, Operating Unit 10, 'Waste Treatment and
Immobilization Plant.'"

This letter submits the Hanford Facility RCRA Permit Modification Notification Form 24590-
LAW-PCN-ENV-07-003 (Attachment 1). The form describes a requested Class '1' modification
to the Reference requiring approval from the Washington State Department of Ecology
(Ecology). A Bechtel National, Inc. certification statement is provided in Attachment 2.

Modification Notification Form 24590-LAW-PCN-ENV-07-003 updates the Low-Activity
Waste (LAW) Vitrification Building Piping and Instrumentation Diagrams for the LAW Primary
Offgas Process System Melter 1 and LAW Primary Offgas Process System Melter 2, in
Appendix 9.2 of the Reference.

Ecology was provided an opportunity to review the modification notification form and the
associated information and comments were dispositioned.

If you have any questions, please contact me, or your staff may contact Lori A. Huffman, Office
of Environmental Safety and Quality, (509) 376-0104.

Sincerely,

Shirley J. Olinger, Acting Manager
Office of River Protection

ESQ:LAH

Attachments: (2)

cc: See page 2

Ms. Jane A. Hedges
07-ESQ-132

-2-

AUG 10 2007

cc w/attachs:

Administrative Record *H-0-8*
BNI Correspondence
Environmental Portal, LMSI

cc electronic:

W. S. Elkins, BNI
B. G. Erlandson, BNI
P. A. Fisher, BNI
J. S. Hill, BNI
S. Murdock, BNI
P. Peistrup, BNI
D. Robertson, BNI
B. Becker-Khaleel, Ecology
E. A. Fredenburg, Ecology
T. Gao, Ecology
A. A. Hamar, Ecology
S. A. Thompson, FHI
A. C. McKarns, RL
D. J. Sommer, SCS

cc w/o attachs:

D. A. Klein, BNI
J. Cox, CTUIR
S. Harris, CTUIR
L. Cusack, Ecology
S. L. Dahl, Ecology
G. P. Davis, Ecology
G. Bohnee, NPT
K. Niles, Oregon Energy
R. Jim, YN

Attachment 1
07-ESQ-132

Hanford Facility RCRA Permit Modification Notification
Form 24590-LAW-PCN-ENV-07-003

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-07-003

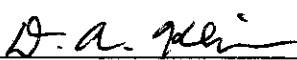

Hanford Facility RCRA Permit Modification Notification Form**Part III, Operating Unit 10****Waste Treatment and Immobilization Plant**

Index

Page 2 of 3: Hanford Facility RCRA Permit, Operating Unit 10, Waste Treatment and Immobilization Plant
Update LAW Vitrification Building Piping and Instrumentation Diagrams (P&IDs) for the LAW
Primary Offgas Process System Melter 1, LAW Primary Offgas Process System Melter 2, in
Appendix 9.2 of the Dangerous Waste Permit.

Submitted by Co-Operator:

Reviewed by ORP Program Office:


D. A. Klein
Date
S. J. Olinger
Date

¹ Class 1 modifications requiring prior Agency approval.

² If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if applicable.

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-07-003

Hanford Facility RCRA Permit Modification Notification Form

Unit:

Waste Treatment and Immobilization Plant

Permit Part & Chapter:

Part III, Operating Unit 10

Description of Modification:

The purpose of this Class 1 prime modification is to update the following Piping and Instrumentation Diagrams (P&IDs) for the LAW Primary Offgas Process System Melter 1, LAW Primary Offgas Process System Melter 2. The following permit P&IDs are submitted to replace those currently in Appendix 9.2.

Appendix 9.2

Replace:	24590-LAW-M6-LOP-P0001, Rev. 1	With:	24590-LAW-M6-LOP-P0001, Rev. 2
	24590-LAW-M6-LOP-P0002, Rev. 1		24590-LAW-M6-LOP-P0002, Rev. 2

The referenced P&IDs are complete revisions. They incorporate changes provided in applicable document change forms (e.g., DCN, SCN, SDDR, FCN, FCR, etc.) and changes associated with the resolution to comments on change documents since the issuance of the last revision of the permit drawing. This modification requests Ecology approval and incorporation into the permit. Revisions are the result of ongoing design changes. The following identifies the significant types of changes on the attached drawings.

LAW Vitrification Facility - Piping and Instrumentation Diagram P&ID 24590-LAW-M6-LOP-P0001 (Rev. 2)

The DCNs associated with changes to P&ID 24590-LAW-M6-LCP-P0001 are provided in drawing Note 54.

- Added and revised various notes as symbols and legends, slopes, reducers, valve locations, and system designators
- Added slope notation to numerous lines including bulge piping
- Corrected numerous off-sheet coordinates
- Added Seismic Category flags and incorporated various editorial comments
- Added reducers and nozzles to WESP purge heaters
- Deleted pressure control valves and added orifice plates, nozzle numbers, and reducers to LOP-HTR-00001
- Added reducers to show 8" LOP-FV-1140 on 10" line between offgas LVP HTR-00001A/B and LOP-WESP-00001
- Added instrument service air from ISA manifold to bulge LOP-BULGE-00001
- Incorporated various editorial comments

LAW Vitrification Facility - Piping and Instrumentation Diagram P&ID 24590-LAW-M6-LOP-P0002 (Rev. 2)

The DCNs associated with changes to P&ID 24590-LAW-M6-LCP-P0002 are provided in drawing Note 53.

- Added and revised various notes as symbols and legends, slopes, reducers, valve locations, and system designators
- Added slope notation to numerous lines including bulge piping
- Corrected numerous off-sheet coordinates
- Added Seismic Category flags and incorporated various editorial comments
- Added reducers and nozzles to WESP purge heaters
- Deleted pressure control valves and added orifice plates to LOP-HTR-00002
- Added reducers to show 8" LOP-FV-2140 on 10" line between offgas LVP HTR-00001A/B and LOP-

¹ Class 1 modifications requiring prior Agency approval.

² If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if applicable.

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-07-003

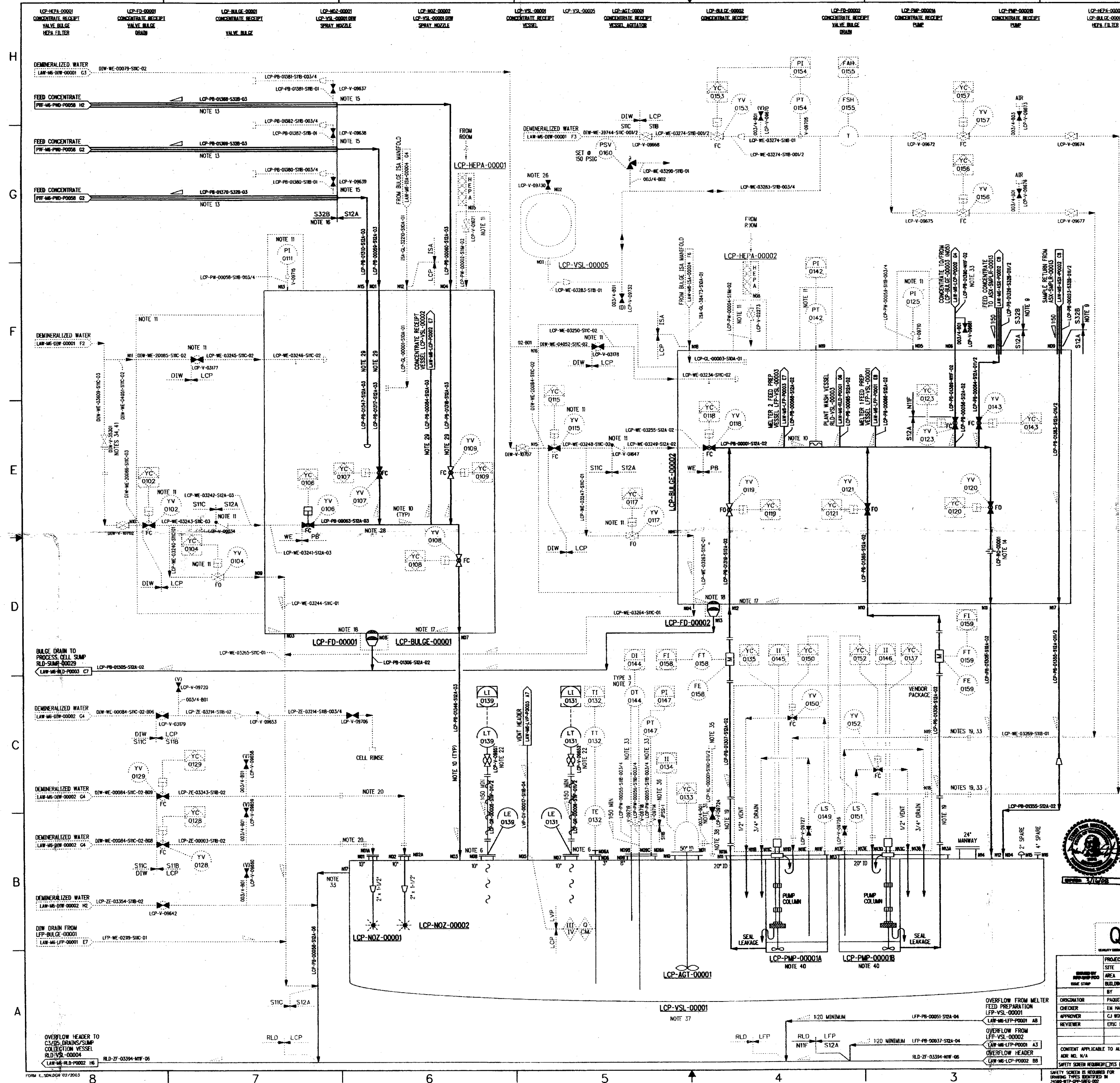
WESP-00002

- Added instrument service air from ISA manifold to bulge LOP-BULGE-00002
- Incorporated various editorial comments

The following is a list of outstanding change documents that have not been incorporated into this modification:
24590-LAW-M6N-LOP-00051

WAC 173-303-830 Modification Class: ^{1 2}	Class 1	Class ¹ 1	Class 2	Class 3
Please mark the Modification Class:		X		
Enter Relevant WAC 173-303-830, Appendix I Modification citation number: N/A				
Enter wording of WAC 173-303-830, Appendix I Modification citation: In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class ¹ 1 modification. WAC 173-303-830(4)(d)(ii)(A) states, "Class 1 modifications apply to minor changes that keep the permit current with routine changes to facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the director may require prior approval."				
Modification Approved: <input type="checkbox"/> Yes <input type="checkbox"/> No (state reason for denial) <u>Reason for denial:</u>			Reviewed by Ecology:	
			B. Becker-Khaleel	Date

24590-LAW-M6-LCP-P0001



NOTES:

- SEE DRAWINGS 24590-WTP-M6-50-P0001 THROUGH 24590-WTP-M6-50-P0008 FOR GENERAL NOTES, SYMBOLS AND LEGEND, AND GENERAL SLOPE REQUIREMENTS.
- THE PRESSURE BOUNDARY FOR ALL SYSTEMS, STRUCTURES, AND COMPONENTS SHOWN ON THIS DRAWING IS QUALITY LEVEL CM AND SEISMIC CATEGORY SC-IV UNLESS OTHERWISE NOTED.
- DELETED
- DELETED
- DELETED
- RADAR GUIDE TUBE IS TO BE ROUTED TO THE FLOOR ABOVE.
- PROVISION FOR FLUSHING USING DEMINERALIZED WATER IS REQUIRED.
- DELETED
- OUTER PIPE DRAINS INTO LCP-BULGE-00002.
- WHERE SLOPE IS DESIGNATED ON PIPING, SLOPE 1:200 MINIMUM UNLESS OTHERWISE NOTED.
- ITEMS INSIDE THE BULGE AND INSIDE DASHED LINES EXTENDING OUTSIDE THE BULGE ARE PROVIDED BY VENDOR.
- DELETED
- BOF IS RESPONSIBLE FOR PIPING BETWEEN LAW AND PRETREATMENT FACILITIES, STARTING AT FIVE FEET OUTSIDE THE LAW FACILITY.
- WELDED RESTRICTION ORIFICE MACHINED FROM BAR STOCK.
- LOCATE HOSE CONNECTION IN CORRIDOR AT ELEVATION 3'-0".
- DOUBLE-WALLED PIPING SPECIFICATION TERMINATES INSIDE THE PROCESS CELL ABOVE FLOOR ELEVATION 3'-0".
- SLOPE BULGE FLOOR 1:100 TOWARDS THE DRAIN.
- STRAINER IS DESIGNED FOR MECHANICAL REMOVAL FROM THE BULGE EXTERIOR.
- SPOOL PIECE TO FACILITATE PUMP REMOVAL.
- SPOOL PIECE TO FACILITATE SPRAY NOZZLE REMOVAL.
- CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING.
- FULL PORT BALL VALVE REQUIRED ON THE RADAR GUIDE TUBES.
- DELETED
- DELETED
- AIR CHARGING VALVE PROVIDED WITH EXPANSION VESSEL BY VENDOR.
- DELETED
- VENDOR TO PROVIDE 3" SCH 80 PIPING FOR THE SECTION OF PIPING CONNECTING YV-0106 TO YV-0108.
- PIPE SHIELDING FOR THE VERTICAL PIPE SHALL BE 4" SCH 80.
- DELETED
- LOCATE VALVE ABOVE EL. 28'-0". FULL PORT VALVE REQUIRED.
- DELETED
- DO NOT POCKET.
- SPOOL IS FOR THE ADDITION OF SIMULANT.
- THIS CONNECTION ALLOWS MAINTENANCE ACCESS FROM 28'-0" FLOOR ELEVATION FOR AGITATOR OIL CHANGE. A CART-MOUNTED OIL SUCTION DEVICE WILL BE USED.
- JPS-11S DEFINED IN INSTRUMENT PIPING MATERIAL CLASS SPEC NO 24590-WTP-3PS-JXFO-10001.
- THE SEISMIC RESTRAINT FOR LCP-VSL-00001 IS SEISMIC CATEGORY SC-III.
- OIL COLLECTION LEG EXTENDS MIN 3 IN. BELOW OIL DRAIN/REFILL NOZZLE.
- DELETED
- THIS IS A CONCENTRATE RECEIPT PUMP SYMBOL.
- SPOOL CONNECTION FOR THE INJECTION OF PRESSURIZED WATER/CHEMICALS TO CLEAR LINE PLUG UPS. THE SPOOL LENGTH SHALL ACCOMMODATE THE LENGTH OF A TEE WITH FLANGES MATCHING THE PIPE SIZE.
- THE COMPONENTS SHOWN ON THIS DRAWING IN PHANTOM DO NOT REQUIRE INDEPENDENT QUALIFIED REGISTERED PROFESSIONAL ENGINEER ASSESSMENTS OF DESIGN OR INSTALLATION INSPECTIONS BY A QUALIFIED INSTALLATION INSPECTOR IN ACCORDANCE WITH THE DWP AND/OR WASHINGTON ADMINISTRATIVE CODE REQUIREMENTS.
- THE DOCUMENT WAS COMPLETELY REVISED AND IDENTIFICATION OF REVISED ITEM IS NOT NECESSARY. REVISED PER 24590-LAW-M6-LCP-00006, 00008, 00012, 00015, 00017, 00018, 00021, 00022, 24590-LAW-M6-M6T-00001 AND 24590-LAW-M6-M6T-00001. ADDED MAGNETIC FLOW METER TO LCP PUMP DISCHARGE LINES. ADDED SLOPE SYMBOLS, INSTRUMENT SERVICE AIR FROM ISA MANIFOLD TO BULGE. DELETED SEISMIC CATEGORY FLAGS AND INCORPORATED VARIOUS EDITORIAL COMMENTS.

HOLD/OPEN ITEMS:

1-6. DELETED

REFERENCES:

- THE REQUIRED BATCH SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE SOFTWARE FUNCTIONAL SPECIFICATION FOR LCP CONCENTRATE RECEIPT PROCESS SYSTEM, 24590-LAW-3PS-LCP-10001.
- 24590-LAW-M6-VPT-P0001, PROCESS FLOW DIAGRAM LAW CONCENTRATE RECEIPT AND MELTER 1 FEED (SYSTEM LCP, GFR, AND LFP).

PLEASE NOTE THAT SOURCE, SPECIAL NUCLEAR AND BYPRODUCT MATERIALS, AS DEFINED IN THE ATOMIC ENERGY ACT OF 1954 (42 USC 2011), ARE REGULATED BY THE U.S. DEPARTMENT OF ENERGY (DOE) FACILITIES EXCLUSIVELY BY ONE ACTING PURSUANT TO ITS REGULATORY AUTHORITY. DOE ASSETS, THAT ARE SUBJECT TO THE HEALTH, SAFETY AND ENVIRONMENTAL RESPONSIBILITY AND AUTHORITY TO REGULATE SOURCE, SPECIAL NUCLEAR AND BYPRODUCT MATERIAL AT DOE-OWNED NUCLEAR FACILITIES INFORMATION CONTAINED HEREIN OR RADIOLOGICALS IS PROVIDED FOR PROCESS DESCRIPTION PURPOSES ONLY.

REV	DESCRIPTION	DATE
3	ISSUED FOR PERMITTING USE	1/13/07
2	ISSUED FOR PERMITTING USE	4/29/04
1	ISSUED FOR PERMITTING USE	12/21/03
0	ISSUED FOR PERMITTING USE	7/26/03

REV	DESCRIPTION	DATE
3	ISSUED FOR PERMITTING USE	1/13/07
2	ISSUED FOR PERMITTING USE	4/29/04
1	ISSUED FOR PERMITTING USE	12/21/03
0	ISSUED FOR PERMITTING USE	7/26/03

PROJECT NO. 24590		CONTRACT NO. AC-227-08RV135	
DATE	7/24/03	P&ID - LAW CONCENTRATE RECEIPT PROCESS SYSTEM CONCENTRATE RECEIPT VESS LCP-VSL-00001	
ORIGINATOR	PAQUETO S. HOLGADO		
CHECKER	EN. NAR		
APPROVER	CJ WINKLER		
REVIEWER	ERIC ESMN		
CONTENT APPLICABLE TO ALARM	YES	SCALE	NONE
ALARM NO. N/A	REV. N/A	24590-LAW-M6-LCP-P0001	
SAFETY SCREEN IDENTIFIED	YES	ELECTRICITY	
SAFETY SCREEN INITIAL	YES	07/05/2007 08:12:52 AM	
SCALE	NONE	44434	
COMPUTER GENERATED	NO	CHANGES NOT PERMITTED	



- # HOLD/OPEN ITEMS:
- 1-6. DELETED
- ## REFERENCES:
1. THE REQUIRED BATCH SEQUENCES, PERMISSIVES, INTERLOCKS, ALARMS AND OPERATOR INTERFACE POINTS ARE FULLY DESCRIBED IN THE SOFTWARE FUNCTIONAL SPECIFICATION FOR LCP CONCENTRATE RECEIPT PROCESS SYSTEM, 24590-LAW-3PS-LCP-T0001.
 2. 24590-LAW-M5-VI7T-P0002. PROCESS FLOW DIAGRAM LAW CONCENTRATE RECEIPT AND MELTER 2 FEED (SYSTEM LCP, GFR, AND LFP).
- PLEASE NOTE THAT SOURCE SPECIAL NUCLEAR AND BYPRODUCT MATERIALS, AS DEFINED IN THE ATOMIC ENERGY ACT OF 1954 (AEA), ARE REGULATED AT THE U.S. DEPARTMENT OF ENERGY (DOE) FACILITIES EXCLUSIVELY BY THE ACTING PURSUANT TO ITS AEA AUTHORITY. DOE ASSUMES THAT PURSUANT TO THE AEA IT HAS SOLE AND EXCLUSIVE RESPONSIBILITY AND AUTHORITY TO REGULATE SOURCE, SPECIAL NUCLEAR, AND BYPRODUCT MATERIAL AT DOE-OWNED NUCLEAR FACILITIES. INFORMATION CONTAINED HEREIN ON RADIOISOTOPES IS PROVIDED FOR PROCESS DESCRIPTION PURPOSES ONLY.

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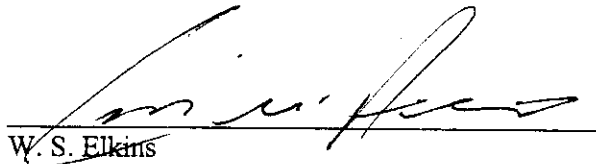
Attachment 2
07-ESQ-132

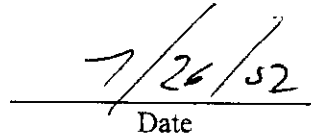
Bechtel National, Inc. Certification Statement

Bechtel National, Inc. Certification

The following certification statement is provided consistent with Contract No. DE-AC27-01RV14136, Section H.26, Environmental Permits, paragraph (g) for the submittal of the Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-LAW-PCN-ENV-07-002.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


W. S. Elkins


Date

for Project Director